THE DETACHMENT AND COMPARTMENTALISATION INVENTORY (DaCI): THE DEVELOPMENT OF AN ASSESSMENT TOOL.

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LIST OF ABBREVIATIONS

A-DES	Adolescent Dissociative Experienced Scale
APA	American Psychiatric Association
ARAS	The Attentional Resource Allocation Scale
CADSS	Clinician-Administered Dissociative States Scale
CBT	Cognitive Behavioural Therapy
CDC	Child Dissociative Checklist
CDS	Cambridge Depersonalisation Scale
CES	Curious Experience Scale
DACI	Detachment and Compartmentalisation Inventory
DES	The Dissociative Experiences Scale
DES-B	Dissociative Experiences Scale-Brief
DES-T	Dissociative Experiences Scale-Taxon
DDIS	The Dissociative Disorders Interview Schedule
DIS-Q	Dissociation Questionnaire
DPS	Dissociative Processes Scale
DSM-5	Diagnostic and Statistical Manual of Mental Disorders Fifth Edition
DSS	Dissociation Symptom Scale
DTDIS	Dissociative Trance Disorder Interview Schedule
DTS	Dissociation Tension Scale

HEC	Human Ethics Committee
IASC	Inventory of Altered Self-Capacities
ICD-10	International Classification of Disease and Related Health Problems Tenth Edition
MAAS	Mindfulness Attention Awareness Scale
MDI	Multiscale Dissociation Inventory
MID	Multidimensional Inventory of Dissociation
PAS	Perceptual Alterations Scale
PDEQ	Peritraumatic Dissociative Experiences Questionnaire
QED	Questionnaire of Experiences of Dissociation
SCID-D-R	Structred Clinical Interview for DSM-5 Revised
SDQ	Somatoform Dissociation Questionnaire
SSD	State Scale of Dissociation
SPSS	Statistical Package for the Social Sciences
TDS	Traumatic Dissociation Scale
WDS	Wessex Dissociation Scale
WHO	World Health Organization

ABSTRACT

There is substantial evidence that identifies and supports a division between two qualitatively distinct forms of dissociation. However, there is currently no scale designed to differentiate these types of dissociation. The purpose of this study is to describe the development and validation of the Detachment and Compartmentalisation Inventory (DaCI). The DaCI was derived from the structural dissociation mode, 29 existing dissociation scales and expert opinions. An initial pilot study was conducted to assess readability, explore validity and reduce items before the DaCI was administered online to 89 non-clinical and 105 clinical participants. The Dissociative Experiences Scale (DES), Mindfulness Attention Awareness Scale (MAAS) and Somatoform Dissociation Questionnaire (SDQ) were included as part of the survey battery for validity measures. The final version of the DaCI is a 22-item, self-administered instrument that is grounded in theoretically literature and support by statistical analysis to assess, (1) compartmentalisation (10 items) and (2) detachment (10 items). The two further items assess the validity of participant responses. The DaCI demonstrated good internal reliability, convergent validity, discriminant validity, concurrent validity and construct validity. The DaCI was designed for clinical research and for screening patients presenting with dissociative symptoms. This study found the scale had solid psychometric properties and could differentiate compartmentalisation and detachment.

Keywords: dissociation, compartmentalisation, detachment, scale development

CHAPTER ONE

1. INTRODUCTION

1.1. Overview and Rationale

Dissociation generally refers to a disruption or discontinuity in the normal integration of one or more aspects of psychological functioning such as memory, identity, consciousness, perception or motor control (Spiegel et al., 2011). Dissociation manifests in symptoms such as amnesia (i.e., a partial or complete loss of memory), depersonalisation (i.e., feeling estrangement from one's self, the sensation of being an outside observer of one's body or feeling one is living inside a dream), flashbacks (i.e., involuntary re-experiencing of a past memory), derealisation (i.e., an alteration in the perception of one's surroundings so that a sense of reality of the external world is lost) and identity alterations (i.e., experiencing multiple selves). Dissociation is intimately related to traumatic and/or overwhelming experiences (Dalenberg & Carlson, 2012), however once a person begins having dissociative symptoms they can experience dissociation in circumstances that are unrelated to trauma (Spiegel et al., 2011). While dissociation is the core feature for dissociative disorders, it is also present in diagnostic criteria for non-dissociative disorders such as post-traumatic stress disorder and borderline personality disorder (Bremner et al., 1998; Spitzer, Effler & Freyberger, 1999), and can be found to be part of the broader psychopathology of many disorders (e.g., schizophrenia, affective disorders, obsessive-compulsive disorder and somatoform disorders). Dissociation can be a predictor for poor responses to treatment and high rates of relapse (Michelson, June, Vives, Testa & Marchione, 1998; Rufer, Fricke, Held, Cremer & Hand, 2006).

Although many acknowledge the clinical significance of dissociation, there is much controversy surroundings its conceptualisation (e.g., Dalenberg & Paulsen, 2009; Steele, Van der Hart, & Nijenhuis 2009).

Currently, substantial evidence identifies and supports a division between two qualitatively distinct forms of dissociation: detachment and compartmentalisation (Allen, 2001, Allen, Console & Lewis, 1999; Brown, 2002; Brown, Schrag & Trimble, 2005; Cardena, 1994; Cardena & Carlson, 2011; Holmes et al., 2005; Steele et al., 2009), which brings greater conceptual clarity to the construct. The clear measurement of such a distinction would have significant theoretical, empirical and therapeutic implications. This research aims to integrate science and practice in this complex area by developing a new conceptually- and scientifically-sound assessment measure for the construct of dissociation that can differentiate between detachment and compartmentalisation. In order to achieve this goal, this thesis will review relevant literature on dissociation and scale development, consult with experts in the field, clearly define and conceptualise the constructs compartmentalisation and detachment as well as use theoretically recommended statistical analyses.

1.2. Diagnostic Classifications

The notion that dissociative disorders lacks "a single, coherent referent" that the field can embrace (Cardena, 1994) is evident by the different definitions and classifications used by current diagnostic manuals. The Diagnostic and Statistical Manual of Mental Disorders fifth edition (DSM-5) of the American Psychiatric Association (APA, 2013) and the International Classification of Disease and Related Health Problems tenth edition (ICD-10) of the World Health Organization (WHO, 1992) do not provide comprehensive definitions of dissociation. Instead, they briefly

describe the ‘essential features’ (DSM-IV) or the ‘common themes’ (ICD-10) (Spiegel et al., 2011). While both classification systems agree that dissociation relates to the autobiographical memory system, consciousness and the domain of personal identity, there are some key differences in their definitions. The DSM-5 defines dissociation as a “disruption in the usually integrated functions of consciousness, memory, identity, or perception of the environment“ (APA, 2013), restricting dissociation to the level of psychic functions and systems. In contrast, the ICD-10 characterizes dissociation as “partial or complete loss of the normal integration between memories of the past, awareness of identity and immediate sensations, and control of bodily movements” (WHO, 1993), acknowledging that it may involve the sensory and motor systems. The conceptualisations of dissociation are also inconsistent in regard to which disorders belong in the dissociative disorders category, the number of symptoms, course, and outcomes (Spiegel et al., 2011). These inconsistencies may serve to perpetuate the confusion surrounding the complex issue of dissociation (Holmes et al., 2005).

1.3. Dissociation: Category or Dimension?

Various efforts have been made to refine and clear up the “muddiness” of the term dissociation. When dissociation was first popularized, it was used to describe a specific set of mental mechanisms that underlined a relatively limited set of clinical phenomena (Brown, 2006; Van der Hart & Dorahy, 2009). It was not until the end of the 19th century that Pierre Janet, elaborated on the concept of dissociation (Van der Hart & Horst, 1989; Van der Hart, Nijenhuis, Steele, & Brown, 2004; Van der Kolk & Fisler, 1995) stating it is a discontinuous phenomenon, only seen in individuals with mental disorders (Putnam, 1989). This generated a considerable expansion to the

number of phenomena thought to be attributable to dissociation considered in contemporary theories and has ultimately led to an astonishing increase in the scope of psychosomatic symptoms, states and processes that the dissociation label is now applied to (Brown, 2006; Cardena, 1994; Carlson & Dalenberg, & McDade-Montez, 2012; Dalenberg & Carlson, 2012). On the surface, this growth in the dissociation domain appeared justified by the widespread belief that all these different phenomena are all qualitatively similar and are products of the same psychological mechanism (i.e., dissociation), characterized by a breakdown in mental integration (Bernstein & Putnam, 1986; Brown, 2006; Dell, 2006).

The differences between such phenomena were accounted for by the "amount" of dissociation present in each case (Brown, 2006). Such thinking was labelled the "unitary model". For example, the Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986) is the most commonly used self-report measure to identify individual differences in dissociation and it can distinguish between dimensional, non-pathological and discontinuous, pathological dissociation (Waller, Putnam & Carlson, 1996). The unitary model accounts for a substantial body of research with findings demonstrating DES scores varying among clinical groups, with more disabling conditions (such as Dissociative Identity Disorder; DID) associated with higher DES scores (Van Ijzendoorn & Schuengel, 1996). Despite the appealing nature of the unitary model, it is not universally supported (Cardena, 1994; Frankel, 1990, 1994; Van der Hart et al., 2004) and as a result it gave rise to the concept of the dissociative continuum.

The dissociative continuum is a dimensional model whereby dissociation exists along a continuum from relatively common non-pathological dissociative experiences (e.g., daydreaming) to severe clinical forms (e.g., dissociative disorders).

The dissociative continuum has been one of the most dominant models in the field of dissociation (Gold, 2004; Putnam, Helmers & Trickett, 1993; Ross, 1996) however controversy about whether dissociation represents a dimensional or typological construct has not waned (Putnam et al., 1996). For example, some authors provide support for the continuum model by presenting evidence showing differences in mean DES scores across diagnostic groups (i.e., clinical and non-clinical samples). However more recent studies have showed these "supposed" differences between groups can be explained by the proportion of high scoring subjects in each group (i.e., high dissociators) suggesting the existence of distinct dissociative types, which contradicts the continuum model of dissociation (Putnam et al., 1996).

1.4. Pathological Dissociation

Many critics voice concerns regarding the tendency to over-extend the definition of dissociation to include any symptom involving an alteration in consciousness or loss of mental or behavioural control (i.e. the low end of the continuum spectrum)(Frankel, 1990; 1994), obscuring fundamental differences between the various phenomena (Holmes et al., 2005). Numerous attempts have been made to address the confusion by identifying separate "types" of dissociation (Allen, 2001; Brown, 2002; Brown et al., 2005; Cardena, 1994; Putnam, 1997; Van der Kolk & Fisler, 1995). Some theorists argue that certain 'types' of dissociation are normal while others are not. For example, embedded in the DES is a subset of eight items referred to as the DES-Taxon (DES-T) that is used to identify pathological dissociation. Pathological dissociation may include amnesia (Waller et al., 1996), depersonalisation (Simeon, Knutelska, Nelson, & Guralnik, 2003), and identity diffusion (Waller et al., 1996), while normal dissociation might include detachment

(Briere, 2006), absorption (Banois, Botells & Garcia-Palacios, 1999), or hypnotizability (Spiegel, 1974). The dissociative "taxon" allegedly mathematically differentiates between qualitatively distinct groups of people who do and do not experience pathological dissociation. Despite the link between taxonic membership and clinical diagnoses still being heavily debated (Modestin & Erni, 2004; Ross, Duffy & Ellason, 2002; Simeon et al., 2003), it has been suggested that those with taxon-positive scores may qualify for a dissociative disorder (Waller & Ross, 1997) while taxon-negative individuals are not necessarily at risk.

1.5. Beyond the Non-pathological-Pathological Divide: Detachment & Compartmentalisation

In the battle against confusion, a handful of authors have uncovered subtle distinctions, formulated definitions and ultimately proposed a change in the way dissociation is currently thought about, classified and treated. Cardena provided a systematic overview of the various uses of the term dissociation to aid clarification (1994). He described dissociation in three distinct ways: 1) as a lack of integration of mental modules or systems (i.e., several non-pathological forms of dissociation that should not be considered dissociative symptoms), 2) as an altered state of consciousness (i.e., a disconnection from the self or the world including dissociative phenomena that are characterized by an apparent dysfunction in perception, memory, or action that cannot be reversed by an act of will and occurs in the presence of preserved functioning of the apparently disrupted system), and 3) as a defence mechanism (i.e., depersonalisation and derealisation). The first and second categories qualitatively differ from each other whereas the third category mainly reflects the function of the other two. Recent conceptualisations converge that

"compartmentalisation" and "detachment" should be used as the labels to describe these two types of dissociation (Allen, 2001; Holmes et al., 2005) however the 'best' way to conceptualise these constructs is less agreed upon. For example, Putnam (1997) distinguished between dissociative-process symptoms such as depersonalisation and derealisation, and symptoms characterized by a lack of integration between areas of experience or knowledge (e.g., DID). The former are more consistent with detachment and the latter with compartmentalisation. Allen (2001) distinguishes between detachment and compartmentalisation within trauma-related disorders. Detachment is described as the most pervasive form of dissociative disturbance and encompasses three levels of detachment; mild (absorption), moderate (depersonalisation & derealisation) and extreme (unresponsiveness). Compartmentalisation referred to a structured separation of mental processes (e.g., thoughts, emotions, cognition, memory and identity) that are ordinarily integrated, with the exclusion of whole realms of experiences from consciousness (e.g., amnesia, and DID). Cardena and Carlson (2011) define compartmentalisation as the lack of integration between psychological processes involving semi-independent mental modules or systems that are not consciously accessible, and/or not integrated within the person's conscious memory or identity. In contrast detachment is defined as alterations of consciousness characterized by a sense of estrangement or disconnected from self, others or environment. Lastly, Brown (2002) distinguishes between compartmentalisation of mental systems giving rise to dissociative amnesia, dissociative fugue, DID, and the conversion disorders and, detachment-like experiences encompassing depersonalisation/derealisation, peri-traumatic dissociation and out of body experiences. Brown (2006) makes one further distinction suggesting that not all symptoms of depersonalisation are considered detachment; instead "made

actions" (actions the individual does not feel like they are controlling) are categorised under compartmentalisation.

The structural dissociation model (Van der Hart , Nijenhuis, Steele & Brown, 2004; Steele et al., 2009; Van der Hart, Nijenhuis & Steele, 2006) also acknowledges two different but related phenomenon involved in the disruptions in integrated function but labels these, (1) structural dissociation and (2) alterations in consciousness (Steele et al., 2009). Structural dissociation is defined as a division of the personality compared to alterations in consciousness that are defined by a reduction of the field and/or level of awareness (Steele et al., 2009). According to this model, structural dissociation is typically classified as pathological however alterations in consciousness only become pathological when the experiences are frequent, inflexible, excessive and are unable to be consciously controlled (e.g., day dreaming for hours at a time, disconnected with daily life; Somers, 2002). The structural dissociation model proposed by Steele and colleagues (2009) states only structural dissociation (i.e., compartmentalisation) should be considered as "true" dissociation and believes alterations in consciousness (i.e., detachment) has been incorrectly added to the concept of dissociation, creating confusion. While there are differences present, it is clear that they all converge on a similar two-part taxonomy of dissociation.

1.6. Defining Compartmentalisation and Detachment

Compartmentalisation is characterized by a "deficit in the ability to deliberately control processes or actions that would normally be amenable to such control" (p. 7) including an inability to bring normally accessible information into conscious awareness (i.e., amnesia) (Holmes et al., 2005). Deficits of this kind cannot

be overcome by a simple act of will, but are reversible. In each case, the functions that are no longer amenable to deliberate control, and the information associated with them, are "compartmentalised" (Holmes et al., 2005). One of the defining features of compartmentalisation is that the compartmentalised processes continue to operate normally (apart from their inaccessibility to volitional control), and are able to influence ongoing emotion, cognition and action (Brown, 2002, 2006; Cardena, 1994; Holmes et al., 2005; Kihlstrom, Barnhardt, & Tataryn, 1992). This preservation of apparently disrupted functions is one of the principle differences between compartmentalisation and detachment phenomena. Clinically, the manifestations of compartmentalisation include dissociative amnesia, conversion symptoms, other somatoform dissociation symptoms (Nijenhuis & Van der Hart, 1999), made actions, and 'body memories' (i.e., re-experiencing traumatic pain in the body; Van der Kolk, 2014).

In contrast, detachment is defined by the subjective experience of an altered state of consciousness characterized by "a sense of separation from certain aspects of everyday experience" from the body, emotion experience, sense of self or the external world (Holmes et al., 2005). Detachment experiences may occur in isolation although they commonly co-occur (Allen et al., 1999; Steinberg, 1993), reflecting the operation of common neurobiological mechanisms (Sierra & Berrios, 1998). Absorption, derealisation and some varieties of depersonalisation, characterize detachment, with phenomenological descriptions including, feeling spaced out, unreal or in a dream, an absence or alteration of emotional experience, experiencing events without really feeling as though they are happening, and that the external world appears lifeless and two-dimensional (Allen et al., 1999; Baker et al., 2003; Butler, Duran, Jasiukaitis, Koopman & Spiegel, 1996; Noyes & Kletti, 1997; Sierra & Berrios, 1998, 2001,

Spiegel & Cardena, 1991). States of detachment can be acute, temporary, or develop into chronic conditions (e.g., maladaptive daydreaming) (Holmes et al., 2005; Somers, 2002; Somers, Lehrfeld, Bigelsen & Jopp, 2016). Some authors have suggested that detachment may have a distinct biological/physiological basis (Holmes et al., 2005; Hunter, Phillips, Chalder, Sierra, & David, 2003; Sierra & Berrios, 1998). In some circumstances detachment appears to arise from intense fear and has environmental or intra-personal triggers. These phenomena have been associated with trauma and PTSD, and detachment shares numerous similarities with the concepts of peri-traumatic dissociation (i.e., dissociative experiences during and immediately after a traumatic event) and emotional numbing (Holmes et al., 2005). It is possible that detachment impedes the processing of information during trauma that provides the foundation for compartmentalisation of that material. Although a detached state can be adaptive to minimize the potentially debilitating effects of extreme affect in threatening situations, it may be highly aversive and debilitating if it persists over time (Brown, 2006).

1.7. Empirical Evidence Supporting Separate Constructs

The distinction both conceptually and phenomenologically, between compartmentalisation and detachment stems from evidence collected by clinical, psychometric and experimental research. Numerous clinical studies have demonstrated individuals with disorders characterized by compartmentalisation symptoms (e.g., somatization and conversion disorders) display high levels of dissociative experiences (Harden, 1997; Prueter, Sar, Akyuz, Kundakci, Kızıltan, & Doğan, 2004; Schultz-Venrath, & Rimpau, 2002; Spitzer, Spelsberg, Grabe, Mundt, & Freyberger, 1999) and low levels of symptoms typical of detachment (Baker et al.,

2003, Brown et al., 2005; Simeon et al., 2003). Clinically, those experiencing compartmentalisation symptoms often have high levels of detachment experiences, these can co-occur, as Janet (1907) made clear in his originally definition of dissociation, which he defined as, "a form of mental depression [i.e., lowered integrative capacity] characterized by the retraction of the field of consciousness [detachment] and a tendency to the dissociation and emancipation of the systems of ideas and functions [compartmentalisation] that constitute personality" (Janet, 1907, p. 332).

Furthermore, factor analytic studies of the DES have frequently indicated that the scale comprises three factors: depersonalisation/derealisation (primarily detachment), amnesia (an example of compartmentalisation) and absorption (detachment). These three factors have been identified in several large general population and student population samples (Frischolz, Braun, Sachs & Schwartz, 1991; Goldberg, 1999; Ross, Joshi, & Currie, 1991; Sanders & Green, 1994; Stockdale, Gridley, Balogh, & Holtgraves, 2002), in a mixed clinical population (Carlson et al., 1991) and in clinical samples including rape victims (Darves-Bornoz, Degiovanni, & Gaillard, 1999) and DID patients (Ross, Ellason, & Anderson, 1995). Overall, the results of factor analyses broadly support the view that depersonalisation/derealisation/absorption (detachment) represents a statistically separable factor from amnesia (compartmentalisation) and is consistent with the view that the two processes are conceptually distinct from one another.

In addition, experimental research indicates detachment is comprised of a specific mental state with a core neurophysiological profile (i.e., top-down inhibition of the limbic emotional systems and an activation of the right prefrontal cortex; Sierra & Berrios, 1998). This state serves the evolutionary function to minimize anxiety and

to maintain behavioural control in the face of extreme threat. In the absence of threat this state, if perpetually activated, becomes very dysfunctional and a chronic condition. A distinct neurophysiological profile has not yet been identifies for compartmentalisation however a number of studies have identified a number of key brain structures that continue to be implicated in DID cases including the dorsal anterior cingulate, the prefrontal cortex, and the amygdala and insula, as well as possible neural networks involved (Reider et al., 2014; Reinders, Nijenhuis, & Paans, 2003; Reinders, Nijenhuis, & Quak, 2006).

The outlined distinction may also have treatment implications (Holmes et al., 2005). It has been suggested that compartmentalisation might be successfully treated by reactivation and reintegration of the compartmentalised elements using hypnosis, direct and indirect suggestions and reliving procedures designed to access procedural representations about pre-morbid functioning (Holmes et al., 2005; Oakley, 2001). Detachment however represents a specific state of consciousness and therefore requires an adapted approach to therapy whereby the focus is on the identification of potential triggers and prevention of the induce detachment state by triggers. Attention training (CBT) or skill training (DBT) may be beneficial for those struggling with detachment (Hunter, Baker, Phillips, Sierra & David, 2005; Linehan, 1993).

1.8 The Challenge of Separating the Constructs

Disentangling the proposed types of dissociation and the related phenomenon is complex. For example, experiencing a retraction of the field of consciousness might be interpreted as both derealisation (i.e., a change in one's own perception of the environment) and conversion with a continuous transition (i.e., a sensory deficit; Spitzer, Wrede & Freyberger, 2004). Dissociative amnesia is considered a

compartmentalisation phenomenon (i.e., a failure of volition to bring specific memories into conscious awareness) but an altered state of consciousness as experienced in detachment may interfere with the encoding and storage of information, particular in cases of traumatic material (Holmes et al., 2005). Therefore dissociative amnesia may have its origin in detachment (i.e., encoding and storage deficit), even though it is a manifestation of compartmentalisation (i.e., retrieval failure). To further complicate the picture, although the pathological-non-pathological dissociation distinction has been well established (e.g., dissociative continuum and dissociative taxon), this divide does not differentiate detachment and compartmentalisation. For example detachment can present as both pathological (e.g., depersonalisation) and non-pathological (e.g., absorption) dissociation. Likewise, compartmentalisation can also present as both pathological (e.g. identity alterations) and non-pathological (e.g., hypnotic states) types of dissociation. Despite its clinical importance, dissociation represents a semantically open term leading to conceptual confusions that in turn might restrict its value. The subdivision of dissociation into qualitatively distinct types (i.e., pathological versus non-pathological dissociation and detachment versus compartmentalisation) may refine current conceptualisation, however the scientific and clinical value of these promising refinements remains to be proven.

1.9. Current Measures of Dissociation

Currently, there are many valid and reliable measures of dissociative symptoms that have been developed by researchers and are used frequently by clinicians. All differ in length (short: e.g., Dissociative Experience Scale (DES); Berstein & Putnam, 1986, long: e.g., Multidimensional Inventory of Dissociation

(MID); Dell, 2006), style (self-report: e.g., The Perceptual Alteration Scale (PAS); Sanders, 1986, structure interview: e.g., The Structured Clinical Interview for DSM-IV Dissciative disorders (SCID-D-R); Steinberg, Rounsaville, & Cicchetti, 1990), phenomena captured (psychological: e.g., State Scale of Dissociation (SSD); Kruger & Mace, 2002, somatoform: e.g., Somatoform Dissociation Questionnaire-20; Nijenhuis, Spinhoven, Van Dyck, Van der Hart, & Vanderlinden, 1996, or both: e.g., MID; Dell, 2006) and response formats (presence: e.g., Questionnaire on Experiences of Dissociation (QED); Riley, 1988, frequency: Cambridge Depersonalisation Scale (CDS); Sierra & Berrios, 2000, severity: e.g., DES; Dalenberg, & Carlson, 2010). Despite each of these instruments being an effective screening or diagnostic tool for dissociative symptoms, none are designed to systematically assess and differentiate between compartmentalisation and detachment, even though many may do this in a general manner.

1.10. Scale Development

The primary goal of scale development is to create a valid and reliable measure for the construct under investigation. To enhance the quality and accuracy of the proposed dissociation assessment tool in this study, scale construction literature that outlined theoretical principles, practical issues, pragmatic decisions and construction steps related to scale development, was utilized. Proposed steps to scale development include, develop a clear conceptualisation of the target construct, generate an over inclusive item pool, determine the format, have items reviewed by experts, include validation items and administer items to a development sample before evaluating the items using statistical analysis (Clark & Watson, 1995; Furr, 2011). In line with these recommendations for scale development, simple language was used

which avoid colloquialisms and other language for which familiarity will vary widely with factors including age, ethnicity, region, and gender (Clark & Watson, 1995; Furr, 2011). Following these recommendations heightened the robustness of the current scale construction.

CHAPTER TWO

2. The Pilot Study

2.1. Overview

This study was conducted to assist the initial development of the DaCI. The objectives of the pilot study were to (1) explore the potential to reduce items, (2) assess internal consistency, (3) assess convergent validity, (4) explore construct validity, and (5) assess readability.

2.2. Hypotheses

Hypothesis I. Pathological dissociation is a multifactorial construct.

1A: Factor structure. The DaCI was predicted to yield two theoretical derived factors, capturing the phenomena of 1) detachment and 2) compartmentalisation.

Hypothesis II. Compartmentalisation and detachment are different but related constructs.

2A. Correlations. Compartmentalisation and detachment subscales are expected to be highly correlated.

2B. Correlations. It was predicted that Compartmentalisation will be more highly correlated with the DES-T than the detachment subscale

2C. Correlations. Compartmentalisation was expected to be more highly correlated with the SDQ than the detachment subscale

2D. Discriminant validity. Compartmentalisation and detachment subscales were predicted to have a negative relationship with the MAAS.

Hypothesis III. There are qualitative differences between those people with dissociative disorders and those without dissociative disorders.

3A. Concurrent validity. The DaCI was expected to distinguish between dissociative patients and non-dissociative individuals

Hypothesis IV. The DaCI measures dissociation.

4A. Convergent validity. DaCI scores were predicted to be highly correlated with the DES.

2.3. Method

2.3.1. Participants

Twenty-nine students were recruited from the University of Canterbury. All indicated they were fluent speakers of English and the majority (*N*=22; 75.8%) did not report any relevant memory, visual, or attentional problems. Impairments reported did not impact participants' capacity to successfully complete the questionnaires (e.g., not being able to stay focused for long periods of time). Nine participants disclosed current psychiatric disorders, with three receiving current treatment for mood and anxiety difficulties. One participant chose not to disclose any demographic information. Demographic data for participants are given in Table 1.

Table 1
Sample Demographic Characteristics: Pilot Study

Characteristic	*N*	%
N	29	100
Gender		
Male	3	10.3
Female	25	86.2
Missing	1	3.4
Age (years)		
Mean (SD)	21.9 (1.9)	93.1
Missing	2	6.9
Ethnicity		
Caucasian	21	72.4
European	5	17.2
Asian	2	6.9
Missing	1	3.4
Education		
Finished High School	6	20.7
Undergraduate Degree	1	3.4
Postgraduate Degree	5	17.2
Missing	22	75.9

2.3.2. Procedure

Students were invited to participate via email or advertisement on a university notice board (See Appendix A). The online survey using the Qualtrics software package outlined the research objectives, time commitment, right of withdrawal (by closing the link), potential risks and benefits, how responses would be kept anonymous and contact details confidential (See Appendix B). Consent was provided by clicking "I agree to participate in this study" (See Appendix C) before demographic information was collected (e.g., gender, age, educational background, relationship status, psychological diagnosis, impairments) and the three scales (DaCI, DES-II and SDQ-5) were displayed. The questionnaires took between 15-25 minutes to complete and participants had the option to leave a contact email address to collect an incentive upon completion. No data was collected about participants who declined

to participate. This study was approved by the University of Canterbury's Human Ethics Committee (HEC) (See Appendix D).

2.3.3. Statistical Analysis

Group differences (non-clinical vs. clinical) were examined using *t* test and Chi-squared analyses. Pearson correlation coefficients were calculated to measure associations between the DaCI, DES, DES-T, SDQ and the MAAS. Spearman's rho was used to measure group differences in responding to the DaCI. Construct validity was assessed by the correlations between DES subscales scores (i.e., amnesia, absorption-derealisation and depersonalisation) and DaCI scores. Internal consistency was evaluated using Cronbach's alpha (Cronbach, 1951). To analyse the dimensionality of DaCI, a principal components factor analysis was performed. Statistical analyses were performed using SPSS 22.0 (SPSS, Chicago, IL). The level of significance was set at 0.05. All tests were two-tailed.

2.3.4. Reading level.

The Flesch–Kincaid readability test is commonly used to indicate how difficult an English reading passage is to understand. The measure uses word length and sentence length to determine the United States reading grade level. The 55-item DaCI had a Flesch-Kincaid Grade Level of 6.6 (7^{th} grade).

2.3.5. Materials

Dissociative Experiences Scale-II (DES-II). The DES is the most widely used self-report instrument for measuring dissociative experiences, such as derealisation, absorption, depersonalisation and psychogenic amnesia (Bernstein & Putnam, 1993).

It is a 28-item measure of dissociative tendencies in clinical and non-clinical populations. A sample item is "Some people have the experience of looking in a mirror and not recognizing themselves". Respondents are asked to estimate the percentage of the time they experience each item when not under the influence of alcohol and drugs. Scores range from 0 (*never*) to 100 (*always*). The Cronbach alpha coefficient of the DES is 0.96 (Van IJzendoorn & Schuengel, 1996) and the convergent validity with other measures of dissociation is strong (r = 0.67; Cohen's d = 1.82; Van IJzendoorn & Schuengel, 1996). DES scores distinguish dissociative diagnostic groups from others (Van IJzendoorn & Schuengel, 1996) and it has a four week test-retest reliability of 0.93 (Frischholz, Braun, Sachs & Hopkins, 1990). Scores above 20 or more conservatively, above 30, are thought to be indicative of pathological dissociation (Carlson & Putnam, 1993). The Cronbach's alpha in the current study was 0.89 (See Appendix E).

The Dissociation Experience Scale Taxon (DES-T). The DES-T (Cronbach's alpha = 0.78; Waller et al., 1996) is a brief eight item measure of pathological dissociation. The DES-T total score can be obtained by averaging DES items 3, 5, 7, 8, 12, 13, 22, and 27. The Cronbach's alpha in the current study was 0.52.

The Somatoform Dissociation Questionnaire (SDQ-5). The SDQ-5 evaluates the severity of somatoform dissociation through the assessment of both negative (e.g., analgesia) and positive dissociative phenomena (e.g., site-specific pain) (Nijenhuis et al., 1996; Cronbach's alpha = 0.96). A sample item is "I grow stiff for a while". Respondents report the frequency that a particular somatoform dissociative symptom is experienced using a 5-point Likert scale, ranging from "1 = this applies to me "*not at all* " to "5 = this applies to me "*extremely*." The five-item SDQ-5 was derived from the SDQ-20, and includes the items 4, 8, 13, 15, and 18. These five items discriminate

best between patients with dissociative disorders and non-dissociative psychiatric comparison patients. Scores range from 5 to 25, with scores over 8 indicating significant somatoform dissociation and a possible dissociative disorder. The Cronbach's alpha in this study was 0.52 (See Appendix F).

Detachment and Compartmentalisation Inventory (DaCI). The DaCI was developed to differentiate proposed types of dissociation. It is a 55-item scale consisting of 30 questions assessing compartmentalisation, 20 questions assessing detachment and 5 validity items. The DaCI has a 7-point Likert scale that is anchored by the words "*never*" and "*daily*" (See Appendix G). The development of the DaCI is now outlined (See Appendix H for development flowchart).

2.4. Development of the DaCI

The items for the DaCI were derived from four sources of information: the structural dissociation model (Van der Hart et al., 2006), trauma and dissociation literature, experts in the field of dissociation and 26 existing instruments for measuring dissociation (DES, PAS, QED, MID, SCID-D-R, CDS, SSD, SDQ-20, Dissociation Questionnaire (DIS-Q); Vanderlinden, Van Dyck, Vandereycken, Vertommen & Jan Verkes (1993), Dissociative Processes Scale (DPS); Harison & Watson (1992), Multiscale Dissociation Inventory (MDI); Briere, (2002), Inventory of Altered Self-Capacities (IASC) Briere & Runtz, (2002), Adolescent Dissociative Experienced Scale-II (A-DES); Armstrong et al., (1997), Child Dissociative Checklist (CDC); Putnam & Peterson, (1994), Peritraumatic Dissociative Experiences Questionaire (PDEQ); Marmar, Weiss & Metzler (1997), Wessex Dissociation Scale (WDS); Kennedy et al., (2004), Clinician-Administered Dissociative States Scale (CADSS); Bremner et al., (1998), The Attentional Resource Allocation Scale (ARAS)

Carleton, Abrams, & Asmundson (2010), The Dissociative Disorders Interview Schedule (DDIS); Ross, Heber, Norton, Anderson, Anderson, & Barchet (1989), Dissociation Tension Scale (DTS); Stiglmayr et al., (2010), Dissociation Symptom Scale (DSS); Carlson & Waelde (2013), Traumatice Dissociation Scale (TDS); Carlson & Waelde (1999); Peritraumatic Dissociative Experiences Questionaire (PDEQ) Modified Version; Marshall, Orlando, Jaycox, Belzberg & Foy (2002), Curious Experience Scale (CES); Goldberg (1999), Dissociative Trance Disorder Interview Schedule (DTDIS); Ross, Schroeder, & Ness (2013).

2.4.1. Defining the Constructs

After consultation with relevant literature and discussion, the constructs compartmentalisation and detachment were clearly defined and 16 symptom types of dissociation were identified. These symptoms were further expanded into 29 symptoms to capture a more comprehensive list of experiences (e.g., Somatoform difficulties consisted of motor, pain and sensory disturbances). The symptoms were organised into one of three groups: agreement, disagreement and not explicitly stated, with regard to how previous authors dominant in the field had classified them as reflecting either detachment or compartmentalisation (Allen et al., 1999; Allen, 2001; Brown et al., 2005; Holmes et al., 2005; Steele et al., 2009). Items, in which there was disagreement amongst authors, were reviewed, discussed and assigned to a subscale by the primary researchers (the author and her primary supervisor). Depersonalisation is a complex construct that captures an array of phenomena including not feeling connected with the self, ego observation experiences and passive influence experiences. Some depersonalisation symptoms fit well with this study conceptualisation of detachment (e.g., heighten self-observation) however others were

better categorised under compartmentalisation (e.g., made actions) hence this phenomenon was split between the constructs. Sixteen symptom types were classified as compartmentalisation and thirteen were classified as detachment (See Appendix I for symptom classifications).

2.4.2. Generating the Item Pool

The initial item pool consisted of every item from the 26 dissociation measures identified (approximately 945 items). All items were first coded (e.g., DES, item 12) to ensure they could be tracked back to the original scale they were sourced from before being sorted under the corresponding symptom heading. For example, I noticed there were gaps in my memory for things that happened to me that I should be able to remember was categorized under the symptom heading dissociative amnesia. Items were deleted from the item-pool if:

a) Shared similar wording (e.g., my body feels strange or unreal vs. feeling as if your body or certain parts of it are unreal). The item deemed 'best' worded by the research team remained in the item pool.
b) Judged not to reflect dissociation (e.g., items related to an encoding failure were not included as this phenomena is not a symptom of dissociation)
c) Considered to represent only extreme forms of dissociation (i.e., DID).
d) Not specific to dissociative disorders (i.e., could measure other psychological disorders, e.g., feeling that your mind or body has been taken over by a famous person could measure the experience of delusions for those with schizophrenia)
e) Measures multiple constructs (i.e., could be a compartmentalisation or a detachment item)

f) Too broad (i.e., could occur in everyday population e.g., I put things down and I don't remember where I put them)

The wording of multiple items was adapted for the purpose of aiding the understanding of readers. Over the course of eight meetings, items were discussed, altered, and removed until a 55-item scale remained, that captured all symptom types of both detachment and compartmentalisation (See Appendix J).

2.4.3. Determining the Response Format

The DaCI selected a similar format to the Dissociation Experience Scale-Brief (DES-B; Dalenberg & Carlson, 2010), a 7-point Likert scale that is anchored by the words "*never"* and "*daily"*. Participants are asked how often do you have the following experience when you are not under the influence of alcohol or drugs? Please circle the number that best describes you. Select a "0" if it has never happened to you, select a "6" if it happens daily to you. If it happens sometimes but not all of the time, select a number between 1 and 5. The DaCI does not require respondent to reflect on experiences in a circumscribed timeframe (e.g., during the last 30 days) but explores symptoms over the course of their lifetime. This is because episodes of amnesia, for example, are often infrequent, so a specified timeframe may fail to detect past episodes.

2.4.4. Items Reviewed

The 55-item DaCI was reviewed by three different sources; a postgraduate student with an English major, ten psychology postgraduate students with knowledge of dissociation and three international experts in the field of dissociation. Feedback was provided regarding the readability, wording and clarity of items as well as

punctuation errors, easy of using the response format and survey presentation software (i.e., Qualtrics). The experts also examined conceptual and item clarity. Alterations were made to the scale based on feedback.

2.4.5. Validation Items

Initially ten validity questions were created or sourced from other scales. Five were selected based on the likelihood that majority of people will elicit a positive response (i.e., have engaged in the behaviour at some stage in their life). The validity questions were included to determine the accuracy of responses by participants. The response format for the validity questions was kept consistent with the other items of the scale. Participants were expected to identify to some degree (i.e., responds from 1-6 were valid, 0 invalid) with most of the validity items in the pilot study (i.e., 3/5) and both in the main study. While it was expected that individuals would have experienced these events more than once or twice in their life, this study only required a positive indication for both items in order to be considered for analyses. Few self-report dissociation measures include assessment of the likelihood that responses are valid.

2.5. Results

2.5.1. Revision of the initial version of the DaCI.

Almost all items correlated most highly with their assigned subscale (i.e., detachment or compartmentalisation), but it was notable that most items also correlated well with all scale items (i.e., Pearson product-moment correlation ≥0.50). This was expected as all DaCI items assess the same construct: dissociation. Items were deleted on the basis of item-total correlations <0.45. Items deleted included;

item-33: I eat something from a supermarket before I have paid for it (validity), item-37: I feel that there is another part, entity or force inside me that tries to stop me from doing or saying things (compartmentalisation: other identities awareness) and item-38: I feel as if all or part of my body has disappeared (compartmentalisation: somatoform disorder sensory). All analysis below pertains to the revised version of the DaCI.

2.5.2. Internal Reliability.

The Cronbach alpha value for the 48-item DaCI (i.e., excluding validity items) was excellent ($\alpha = 0.91$). The Cronbach alpha values of the two subscales were good. The 20-item detachment subscale had a Cronbach alpha value of 0.83. Initially the 30-item compartmentalisation subscale had a Cronbach alpha value of 0.89 but when revised and treated as a 28-item subscale the Cronbach alpha increased to 0.91.

2.5.3. Convergent Validity.

The 48-item DaCI correlated moderately with the DES-II ($r = 0.51$).

2.5.4. Construct Validity.

The DaCI compartmentalisation and detachment subscales mean scores correlated moderately with the DES. Mean compartmentalisation scores correlated more strongly with the SDQ scale scores than mean detachment scores (See Table 2).

Table 2

Correlations between the DaCI subscales, DES, DES-T and SDQ: Pilot Study

	DaCI Detachment	DaCI Compartmentalisation	DES	DES -T	SDQ
DaCI Detachment	-				
DaCI Compartmentalisation	.600**	-			
DES	.477*	.441*	-		
DES-T	.295	.308	.802**	-	
SDQ	.192	.626**	.165	-.028	-

Note. N= 29; DaCI = Detachment and Compartmentalisation Inventory; DES = Dissociative Experiences Scale; DES-T = Dissociative Experiences Scale Taxon; SDQ = Somatoform Dissociation Questionnaire. * $p < 0.01$., ** $p < 0.001$.

2.6. Discussion

The aim of the pilot study was to assist in the development of the DaCI by reducing the number of items, ensuring the full DaCI had acceptable reliability and was an accurate measure of dissociation. The initial analysis suggests three items need to be removed due to not being strongly related to the other DaCI items. The DaCI has shown excellent reliability across subscales and was correlating in the expected direction with the additional scales (i.e., SDQ and DES).

CHAPTER THREE

3. THE MAIN STUDY

3.1. Overview

Study 2 sought to further examine the DaCI and develop an effective scale for differentiating detachment and compartmentalisation. Two samples were recruited to reflect clinical and non-clinical populations. It was predicted that two distinct and statistically different dissociation constructs would be found.

3.2. Method

3.2.1. Participants

Excluded cases. Two hundred and fifty one participants opened the survey link and 220 participants submitted their responses. Twenty-six participants (11.8%) were excluded from analysis, 18 non-clinical and seven clinical. Reasons for exclusion included data missing ($N = 1$), lack of variability in responses ($N = 4$), completing the survey in less than 10 minutes ($N = 18$) and not meeting validity item criteria ($N = 3$). The completion time for all four questionnaires varied greatly among participants (4-60+ minutes) in both samples. The researchers decided to regulate the quality of responses by creating an exclusion criterion that participants must spend at least 10 minutes answering the survey before submitting their responses. This exclusion criteria was create after data collection. Participants were unaware of a minimum time requirement. To set the specific time frame for the exclusion criteria, the researchers timed how long it took them to read all questions and responded to the survey independently. It took approximately 15 minutes to complete the task. Participants

responses with times longer than 15 minutes were not reviewed during this validity check, participants with times less than 10 minutes were automatically excluded from analyses and participants with a time between 10-15 minutes had their responses reviewed for variability. This process was thought to eliminate those participants who responded to items without self-reflection therefore improving the quality of data collected. Researchers also removed participants that had the same response for all items (e.g., all zero responses). Dissociation can range from a non-clinical level to a clinically disordered level. Dissociation at a non-clinical level (often referred to as dissociative tendencies) is apparent in all individuals (Saidel-Goley, Albiero & Flannery, 2012) therefore it would be expected that even the non-clinical sample would have some variability in their experience and this would be reflected in their scores. Statistically, the excluded participants were found to be no different demographically than the samples included in the final data analyses. The excluded participants from the clinical group were not significantly different in age, $F(1, 86) = 1.46$, $p = 0.23$, or gender, $\chi^2 (1) = 0.725$, $p < .59$ than those included in the clinical sample. The excluded participants from the non-clinical group also had non-significant differences in age, $F(1, 124) = 3.09$, $p = 0.08$, and gender, $\chi^2 (1) = 0.226$, $p < .18$, compared to those included in the non-clinical analyses.

Non-clinical sample. Consisted of students (N=89) recruited from the University of Canterbury. All participants indicated they were fluent speakers of English and the majority (N=101; 80.2%) did not report any relevant memory, visual, or attentional problems. Impairments reported did not impact participants' capacity to successful complete the questionnaire (e.g., wearing prescription eye glasses).

Psychiatric sample. The clinical sample (*N*=105) were psychiatric patients recruited from hospitals and private practice in New Zealand, Australia, United States and throughout Europe. All participants indicated they were fluent speakers of English. Impairments that were reported did not impact participants' capacity to successfully complete the questionnaire. Fourteen participants were moved from the non-clinical sample into the clinical group after disclosing they were currently receiving treatment for a psychiatric diagnosis Demographic data for participants are given in Table 3.

Table 3
Sample Demographic Characteristics: Main Study

Characteristic	Non-Clinical		Clinical	
	N	%	*N*	%
N	89	45.8	105	54.2
Gender				
Male	16	18.0	18	17.1
Female	73	82.0	84	80.0
Other	0	0	3	2.9
Age (years)				
Mean (*SD*)	22.2 (3.8)	98.8	40.9 (13.4)	97.1
Missing	1	1.2	3	2.9
Ethnicity				
Caucasian	55	61.8	85	81.0
European	16	18.0	5	4.8
Asian	10	11.2	2	1.9
Maori	3	3.4	2	1.9
Pacific Islander	1	1.1	0	0
Hispanic	1	1.1	0	0
Other	3	3.4	11	10.5
Education				
Left High School	0	0	14	13.3
Finished High School	55	61.8	21	20.0
Certificate or Diploma	7	7.9	13	12.4
Undergraduate Degree	24	27.0	20	19.0
Postgraduate Degree	3	3.4	27	25.7
Diagnoses				
DID	0	100	45	42.9
Personality Disorder	0	100	11	10.5

PTSD	0	100	52	49.5
Somatic Symptom Disorder	0	100	8	7.6
Mood Disorder	0	100	42	40.0
Eating Disorder	0	100	12	11.4
ADHD	0	100	4	3.8
Anxiety Disorders	0	100	28	26.7
Other Dissociative Disorders	0	100	15	14.3
Substance Use Disorders	0	100	14	13.3

Note. DID = Dissociative Identity Disorder, PSTD = Post Traumatic Stress Disorder and ADHD = Attention Deficit Hyperactivity Disorder

3.2.2. Procedure

Participants were asked to complete the 52-item DaCI (See Appendix G), MAAS, DES-II and SDQ-5 respectively, online, using the Qualtrics software package. As outlined in the information and consent forms at the beginning of the survey, completing the questionnaires was understood as consent to participate in the study. The recruitment letter and link to the survey was sent to the non-clinical participants via their university email address. Participants went into the draw to win one of four $50 gift vouchers. No data was collected about participants who declined to participate. The clinical participants were recruited for this study through their therapists. Therapists were contacted by the primary supervisor of this study via email/phone and provided the survey. Contact was made with therapists who were known to have an active interest in treating trauma and dissociative disorders. The therapists choose which patients to give the information sheet and survey address to, with the patient's clinical safety largely informing who received the information.

3.2.3. Reading Level.

The 22-item DaCI had a Flesch-Kincaid Grade Level of 6.7, a slight improvement from the 55-item scale.

3.2.4. Materials

DaCI. This version of the DaCI had 52 items: 20 detachment items, 28 compartmentalisation items, and 4 validity questions.

DES-II. See description in the pilot study. The Cronbach's alpha for the non-clinical sample was 0.93 and the clinical sample and the whole sample both had Cronbach's alphas of 0.97.

SDQ-5. See description in the pilot study. The Cronbach's alpha for the non-clinical sample was 0.40, the clinical sample 0.69 and the whole sample 0.75.

Mindful Attention Awareness Scale (MAAS). The MAAS is a 5-item scale assessing both recent (e.g., past day) and current experiences of mindfulness (Brown & Ryan, 2003). The MAAS has shown excellent psychometric properties (Cronbach's alpha = .92; Brown & Ryan, 2003) with scores shown to relate to psychological wellbeing outcomes (Brown & Ryan, 2003). Respondents indicate to what degree they have experienced symptoms on a 7-likert scale. A sample item is "I'm finding it difficult to stay focused on what's happening in the present". Higher scores reflect higher levels of dispositional mindfulness. The MAAS was used here to examine the discriminant validity of the DaCI, with higher scores on the MAAS expected to be related to lower scores on the DaCI. The Cronbach's alpha for the MAAS in this study was 0.79 for the non-clinical sample, 0.88 for the clinical sample and 0.86 for the whole sample (See Appendix L).

3.3. Results

All participants completed the DaCI but the survey had varying level of completion for the remaining questionnaires, MAAS (*N*=117) DES-II (*N*=113) and SDQ-5 (*N*=113).

3.3.1. Demographics.

The mean age differed significantly between groups, $t(188) = 12.59$, $p = 0.001$, with the clinical sample older ($M = 40.9$, $SD = 13.4$) than the non-clinical sample ($M = 22.2$, $SD = 3.8$). Gender differences however were not significant, $\chi^2 (1) = 0.004$, $p = 0.95$. Both groups displayed a high elevation of female participants compared to males. Significant differences were found between education and group, $\chi^2 (4) = 50.43$, $p = 0.001$, with the clinical group presenting with higher levels of completed education. A chi square analyses was unable to be engaged in for race due to low field counts in some groups.

3.3.2. Construction of the final version of the DaCI.

30 items were deleted (two validity items, 10 detachment items and 18 compartmentalisation items) from the DaCI to form the final 22-item scale (See Appendix M). This item pruning was not guided strictly by a specific value of item-total correlations within the subscales (e.g., all items with $r < 0.50$), but by the goal of creating more concise subscales consisting of a range of different dissociative symptoms. There was no item overlap present between the two subscales (i.e., compartmentalisation and detachment). Item selection for the detachment subscale was based on the non-clinical sample, with the top ten item-total correlations selected for factor analyses. Items 16, 17 and 26 from the initial factor analysis loaded stronger with the opposing construct (i.e., compartmentalisation) and were replaced with items 1, 7 and 51 (the items with the next highest correlations). Item selection for the compartmentalisation subscale was based on the clinical sample as literature suggests these symptoms would be more present within this population. The top ten item-total correlations were selected for factor analyses and no changes were made to the initial

selection. Validity items 21 and 40 were deleted from the final version of the scale due to poorly correlating with the other validity items and conceptually being difficult for clinical samples to understand. The final scale consisted of two validity items, 10 detachment items and 10 compartmentalisation items, creating a 22-item scale.

3.3.3. Structural Validity.

A principal-components analysis was conducted on the 20 DaCI items with an oblique rotation (direct oblimin)(N =194). The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, KMO = 0.97 (Hutcheson & Sofroniou, 1999). All KMO values were greater than 0.95 for individual items, well above the acceptable level of 0.5 (Field, 2013) and the Bartlett's test of sphericity was significant, χ^2 (190) = 3579.8, p < .001. The communalities were all above .3 further confirming that each item shared some common variance with other items. Two factors had eigenvalues over Kaiser's criterion of 1 and in combination explained 69.8% of the variance. The items that clustered on the same factor suggested that factor 1 represents compartmentalisation and factor 2 represents detachment (See Table 4 for factor loadings). There was little difference between the varimax and oblimin solutions, thus both solutions were examined in the subsequent analyses before deciding on an oblimin rotation for the final solution. All 20 items loaded on the factor they were categorised with before factor analytic investigation (e.g., items categorised as detachment remained grouped with detachment items in the factor analysis).

Table 4

Factor loadings based on a principal components analysis with oblimin rotation for the DaCI-22.

	Compartmentalisation	Detachment
When listening to someone talk, I suddenly realize I do not hear part or all of what was said.	0.05	**0.66**
What I see looks 'flat' or 'lifeless', as if I am looking at a picture.	0.37	**0.42**
I focus on something going on in my mind and more or less lose track of what is happening around me.	-0.18	**0.97**
I feel like I am watching a situation as an observer or spectator.	0.19	**0.67**
I feel divided, as if I have several parts or forces that have feelings, ideas, memories and behaviours that I do not regard as my own.	**0.72**	0.22
I feel as if something or someone has possessed me.	**0.95**	-0.16
At times I go into a trance-like state in which I am barely aware, or unaware, of what is happening around me.	0.17	**0.73**
I have strong feelings that do not seem to belong to me.	**0.79**	0.16
For no medical or physical reason I cannot feel all or parts of my body.	**0.83**	-0.01
I feel detached from memories of things that have happened to me, as if I had not been involved in them.	0.43	**0.49**
I "blank out" or "space out" or my mind goes totally empty.	-0.05	**0.85**
People tell me that my behaviour changes drastically, or that I seem like a different person.	**0.56**	0.35
I find myself in a place and have no idea how I got there or why I am there.	**0.79**	0.03
At times I feel disconnected from a body that does not seem like mine.	**0.77**	0.17
Something inside of me seems to make me do things that I do not want to do.	**0.83**	0.06
I feel mechanical, like a robot or like I'm not really human.	0.35	**0.50**
I look at the clock and realize that time has gone by and I cannot remember what has happened.	0.28	**0.61**
I do not feel in control of what my body does as if there is someone or something inside me directing my actions.	**1.00**	-0.13
I switch back and forth between feelings that seem to belong to me, and feeling that I do not experience as my own.	**0.69**	0.24
I feel my sense of time changes and things seem to happen in slow motion or in double time.	0.37	**0.48**

Note. **Bolded** values indicate the strongest factor loading on the DaCI. (*N*=194).

3.3.4. Internal Reliability.

The Cronbach alpha coefficient for the 20-item DaCI (i.e., excluding the validity items) was 0.97. When treated as 10-item scales (i.e., detachment and compartmentalisation) the DaCI detachment subscale had a Cronbach's alpha of 0.93, with item values ranging from 0.71 to 0.81 and one outlier of 0.62 (Item 1, absorption). The DaCI compartmentalisation subscale had a Cronbach's alpha of 0.96 with item values ranging from 0.76 to 0.89.

3.3.5. Convergent Validity.

The mean 20-item DaCI scores were strongly correlated with the mean DES scores (r=0.82).

3.3.6. Discriminant Validity.

The mean DaCI scores from each subscale correlated moderately negatively with the mean MASS scores (detachment; r = -0.68, compartmentalisation; r = -0.52) The difference between correlations was found not significant (p =0.056)(See Table 5).

Table 5
Correlations between the DaCI Subscales, DES, DES Taxon and SDQ: Main Study.

	DaCI Detachment	DaCI Compartmentalisation	DES	DES -T	SDQ	MAAS
DaCI Detachment	1					
DaCI Compartmentalisation	.929**	1				
DES	.818**	.843**	1			
DES-T	.800**	.859**	.962**	1		
SDQ	.810**	.861**	.788**	.813**	1	
MAAS	-.676**	-.582**	-.560**	-.483**	-.481**	1

Note. N= 29; DaCI = Detachment and Compartmentalisation Inventory; DES = Dissociative Experiences Scale; SDQ = Somatoform Dissociation Questionnaire.
* $p < 0.01$., ** $p < 0.001$.

3.3.7. Concurrent Validity.

The DaCI distinguished between the clinical and non-clinical samples. The mean 20-item DaCI scores for the clinical sample (M = 3.3, SD = 1.8) was significantly higher, $t(192) = 10.9$, $p = 0.001$, than the non-clinical group (M = 1.1, SD = 0.76)(See Table 5). Analyses of the subscales also provided significant difference in responding between samples. The clinical sample (M = 3.7, SD = 1.8) were significantly higher on the detachment subscale, $t(192) = 10.0$, $p = 0.001$, than the non-clinical group (M = 1.6, SD = 0.94). The clinical sample (M = 3.0, SD = 1.9) also responded to the compartmentalisation subscale significantly higher, $t(192) = 10.4$, $p = 0.001$, than the non-clinical group (M = 0.84, SD = 0.68).

3.3.8. Construct Validity.

Mean detachment DaCI scores correlated strongly with the DES (r = 0.82) and the SDQ (r =0.81). The mean compartmentalisation DaCI scores also correlated strongly with the mean DES scores (r =0.84) and the mean SDQ scores (r = 0.86). There was no statistically significant difference found between the compartmentalisation DaCI and detachment DaCI score with the DES (p=0.53) or SDQ (p= 0.22)(See Table 5).

The DaCI detachment subscale was more strongly correlated with the DES absorption-derealisation facet than the DaCI compartmentalisation subscale however the difference between correlations was found not significant (p =0.41). The compartmentalisation scale was more strongly correlated with both the amnesia and depersonalisation DES facets (Table 4). These differences were also found to be non-significant (p = 0.08 and p =0.15, respectively)(See Table 6).

Table 6

Correlations between the DES subscales and DaCI subscales: Main Study.

	DaCI Detachment	DaCI Compartmentalisation	Absorption – Derealisation	Amnesia	Depersonalisation
DaCI Detachment					
DaCI Compartmentalisation	.929**				
Absorption-Derealisation	.776**	.767**			
Amnesia	.684**	.760**	.820**		
Depersonalisation	.841**	.864**	.855**	.862**	

Note. N = 186, ** Correlation significant at the 0.01 level (2-tailed). DaCI = Detachment and Compartmentalisation Inventory

3.3.9. DaCI Responses.

The mean DaCI scores correlated non-significantly with gender (r_s = 0.02; p= 0.76), race (r_s = -0.08; p = 0.25) and education (r_s = 0.09; p = 0.23). The mean DaCI scores significantly correlated with age (r_s = 0.46; p = 0.001) indicating as participants get older, DaCI scores increase (i.e., display greater levels of dissociation). On average the clinical sample presented with greater scores across all the scales and subscales of the DaCI compared to the non-clinical sample (See Table 7).

Table 7

Means and Standard Deviations for Scales and DaCI Subscales: Main Study.

	Clinical Sample M (*SD*)	Non-Clinical Sample M (*SD*)	Whole Sample M (*SD*)
DaCI	3.33 (1.7)	1.13 (0.8)	2.31 (1.8)
DaCI Compartmentalisation	3.04 (1.9)	0.81 (0.8)	2.02 (1.8)
DaCI Detachment	3.70 (1.8)	1.57 (0.9)	2.72 (1.8)
DES	41.14 (24.9)	16.97 (11.6)	30.22 (23.3)
DES-T	35.26 (27.1)	8.33 (9.4)	23.10 (24.9)
MAAS	3.14 (1.2)	3.75 (0.9)	3.41 (1.1)
SDQ	1.97 (0.8)	1.18 (0.3)	1.61 (0.7)

Note. DaCI = Detachment and Compartmentalisation Inventory; DES = Dissociative Experiences Scale; SDQ = Somatoform Dissociation Questionnaire. MAAS = Mindfulness Attention Awareness Scale. DES-T = Dissociative Experiences Scale Taxon.

CHAPTER FOUR

4. MAIN DISCUSSION

4.1. Summary of Findings

The aim of the present study was to create a theoretically sound scale to measure and distinguish between compartmentalisation and detachment, and to determine the psychometric properties of the instrument. Questionnaire construction literature recommends a reduction technique (i.e., start with a large number of items and reduce this number using statistical analyses; DeVellis, 2012). This process was followed to form the final version of the DaCI, reducing the initial 55-item scale to a 22-item scale. The multidimensional structure of the DaCI that was predicted in hypothesis one was confirmed through factor analysis. The DaCI subscales were highly correlated supporting hypothesis 2A. The compartmentalisation subscale was more highly correlated with the DES-T (2B) and SDQ (2C) than the detachment subscale however these differences were non-significant. Both the compartmentalisation and detachment subscales were found to have a negative relationship with the MAAS supporting hypothesis 2D. Concurrent validity was support by the finding that clinical patients had significantly higher DaCI-22 scores than non-clinical participants. This supports hypothesis three. The DaCI was also highly correlated with the DES (4A).

4.4.1. Demographics.

The clinical sample was found to be significantly older than the non-clinical sample. Young age may elevate detachment experiences such as depersonalisation and derealisation (Baker et al., 2003; Michal et al., 2016; Simeon et al., 2003). Thus further work needs to determine how well this subscale measures detachment in

general adult groups. Significant differences were also found between the samples for educational attainment. The non-clinical sample was recruited primarily from university students. The majority had not yet achieved their university degree. This may have resulted in a lower education for the non-clinical sample compared to the clinical sample, which were older and drawn from a treatment-attending population. The non-clinical and clinical samples were not significantly different with regard to gender. The female-to-male ratio between both samples was imbalanced, limiting the generalizability of our results relating to gender differences. However similar gender ratios in clinical populations have been reported (Spitzer et al., 2003), which may reflect a clinical reality for these types of disorders. A higher proportion of females were also evident in the non-clinical sample. Some studies have also found women to be more likely to respond to online surveys than men (Kwak & Radler, 2002; Sax, Gilmartin, & Bryant, 2004; Smith, 2008) providing an explanation for the disproportional gender distribution in the current study.

4.4.2. DaCI Responses

This study found no gender difference in mean DaCI scores; this finding is consisted with previous work that has found no gender difference in dissociative psychopathology (Putnam et al., 1996; Van Ijzendoorn & Schuenged, 1996). This study did however find a significant difference between mean DaCI scores and age, specifically as the sample gets older they report greater frequency of dissociative symptomology. The majority of studies have found the opposite, with the frequency of dissociative experiences peaking during childhood and steadily declining between early adolescence and young adulthood (Putnam, 1996; Sanders, McRoberts, & Tollefson, 1989). This dissimilarity in result seen in the current study could be

explained as a by-product of the samples age. The clinical sample was older than the non-clinical group and also reported significantly greater levels of compartmentalisation and detachment, elevating dissociation in the older participant group. This may explain the positive correlation between age and dissociation in the DaCI that is not demonstrated on other dissociative scales such as the DES (Farrington, Waller, Smerden & Faupel, 2001; Putnam et al., 1993).

4.4.3. DaCI Validity

It has been suggested that dissociation may occur on two separate dimensions reflecting a division of dissociation into detachment and compartmentalisation subtypes (Brown, 2006; Holmes et al., 2005). It can however often be difficult to make distinctions between different dissociative aspects since they occur in combination with one another (Steele et al., 2009). The principal components factor analysis yielded two-factors and confirmed the bi-dimensional structure derived from the theory (Holmes et al., 2005; Brown, 2006). Yet, the DaCI final scales had five items within .3 loading difference of each other. Further studies will help relinquish any doubts about item loadings.

Dissociation is partly associated with retreating from experiences in the present moment, while mindfulness is related to ones ability to stay in the present moment (Zerubavel & Messman-Moore, 2015). Therefore this study predicted both compartmentalisation and detachment subscales would be found to have a negative relationships with the MAAS. A significant negative correlation was found between mindfulness and both dissociative subscales, this is consistent with current studies (e.g., Escudero-Perez et al., 2016) and provided evidence for discriminative validity.

The reliability of the overall DaCI was excellent and the individual subscales also presented with strong Cronbach Alpha's. Compared to the pilot study the DaCI displayed increases across all scales for reliability in the main study suggesting the 22-item final scale identified the 'best' grouping of items that represent detachment and compartmentalisation.

Both the detachment and compartmentalisation subscales were highly correlated with the DES. This result is not unexpected as the DaCI was created with items from the DES and both constructs are present within the DES (i.e., the DES is made up of detachment and compartmentalisation symptoms). Studies have found multiple factor structures for the DES (Ross et al., 1991; Sanders & Green, 1994; Wright & Loftus, 1999; Carlson and Putnam, 1993), suggesting the DES may assess different aspects of dissociation. The DaCI subscales were also highly correlated to the SDQ. Somatoform symptoms are more associated with compartmentalisation (Nijenhuis, Spinhoven, Van Dyck, Van der Hart & Vanderlinden ,1996) consistently the compartmentalisation subscale had a (non-significant) higher correlation with the SDQ than the detachment subscale, providing evidence for construct validity.

The DaCI subscales were shown to correlate with previous distinctions in the DES (i.e., derealisation/depersonalisation, absorption and amnesia) (Michelson et al., 1998). Furthermore, the DaCI subscales were found to be more strongly correlated with the DES subscales that were associated with their conceptualisation. For example detachment is defined as a separation from everyday aspects of experience, including emotional numbing, depersonalisation/derealisation (Brown, 2006; Holmes et al., 2005). This study found the DaCI detachment subscale to be significantly more highly correlated with the DES derealisation/depersonalisation subscale than the compartmentalisation subscale. Likewise, compartmentalisation is viewed as a deficit

in the control of processes or actions that are normally under control, including hypnotic phenomena, amnesia, and dissociative identity disorder (Brown, 2006; Holmes et al., 2005). The DaCI compartmentalisation subscale was found to be significantly more strongly correlated with the DES amnesia subscale than the detachment subscale. There is some controversy regarding whether or not absorption represents a form of dissociation (Bowins, 2004, 2006; Hymer, 1984; Steele et al., 2009; Nijenhuis et al., 1996). Absorption consists of disconnecting from one's current circumstances, both external and psychological, and becoming immersed in another focus (Ross et al., 1991; Waller et al., 1996). When absorption is considered as a dissociative experience it is categorise as a detachment phenomena (Roche & McConkey, 1990; Ross et al., 1991). This study found a significantly stronger relationship with the detachment subscale and the DES absorption subscale compared to the DaCI compartmentalisation subscale. These results suggest that the DaCI is accurately measuring the constructs compartmentalisation and detachment and is further evidence of strong construct validity.

4.2. Implications

The DaCI is the first known scale to make a clear division in the classification of detachment and compartmentalisation, which is grounded in both theoretical and empirical evidence, resulting in number of important implications for the field. Clinically, clinicians can examine different responses to the different subscales. Dissociative-based psychopathology should have elevated compartmentalisation scores, while those with dissociative symptoms, but not dissociative-based disorders should have elevated detachment scores. This may have implications for treatment. Recent evidence suggests that using the "one size fits all" approach to dissociation

treatment is invalid. The use of CBT with an adapted anxiety-disorder model has been found to be an effective form of treatment for detachment (Hunter et al., 2005), as well as techniques grounded in modulation of arousal, and prevention of detachment triggers (Holmes et al., 2005; Ogden, Minton & Pain, 2006). Other treatment with a more complex conceptualisation, such as phase-oriented therapy may be more appropriate for compartmentalisation, where there is attention given to the integration of compartmentalised aspects of self (Ogden et al., 2006; Van der Hart et al., 2006).

The DaCI also gives opportunity to further examine related constructs. For example, recent studies have suggested that dissociation may play a particular causal role in the development of psychotic symptoms (Braehler et al., 2013; Perona-Garcelán et al., 2012; Sar et al., 2010). Specifically, detachment and absorption, but not compartmentalisation, is significantly associated with psychosis-like experiences in non-clinical populations (Humpston, Walsh, Oakley, Mehta, Bell & Deeley, 2016). Further studies have suggested absorption is a vulnerability factor or predisposition to hallucinations, but are not activated until depersonalisation experiences also emerge (Perona-Garcela et al., 2008). Other work has suggested compartmentalisation may be associated with auditory verbal hallucinations (Martin, Preedy & Patal, 2016). Such issues could be explored with the DaCI. In addition dissociation, particularly pathological levels have been found to effect the development of complex PTSD symptoms and also directly and indirectly effect distress associated with relationships (Dorahy et al., 2015). Using the DaCI may allow a determination of what type of dissociation has the biggest impact on relationship functioning.

4.3. Strengths and Limitations

The primary study consisted of participants completing 91 questions (52 DaCI items, 28 DES items, five SDQ items and five MAAS items). Longer questionnaires have been found to be associated with lower response rates (Yammarino, Skinner & Childers, 1991; Galesic & Bosnjak, 2009) and uniform answering (i.e., identical answers to different questions; Krosnick et al., 2002). The current study encountered low response and completion rates indicating participants may have struggled with the initial length of the survey.

The validity items included in this study were not all suitability for a dissociative sample. For example, it is considered typical for adults to engage in private speech (Brinthaupt, Hein, & Kramer, 2009). However, individual with DID experience a division of self and often report living with separate identities that have their own affect, repertoire of behaviours, and sense of self (including body image) different from them (e.g., Putnam, 1989, Brand et al., 2009; Dorahy et al., 2014). Therefore it is possible for a proportion of the clinical group to be talking to themselves but identify with talking to someone else. Individuals with dissociative disorders also learn to compartmentalise overwhelming and conflicting feelings such as betrayal, terror, love and shame (Putnam, 2006; Van der Hart et al., 2006). These individuals are unable to integrate discrete behavioural and emotional states into a coherent and integrated sense of self (Putnam, 2006). Therefore the overwhelming feelings associated with making a mistake or blaming someone else for their mistake may be compartmentalised to another part of self. Future research should consider developing validity questions appropriate to dissociative samples with the aim of reducing the possibility of misinterpretation and unnecessary removal of participants from analysis.

Complete anonymity is thought to facilitate the collection of more accurate data by minimizing social desirability pressures (Colton & Covert, 2007; Evans & Rooney, 2008; Mitchell & Jolley, 2010). However by choosing to administer a questionnaire with complete anonymity, researchers also remove any sense of accountability for participants' answers, reducing motivation to provide accurate reports. Consequently, participants may take cognitive shortcuts when responding and think less carefully, ultimately resulting in providing less accurate data. (Lelkes, Krosnick, Marx, Judd & Park, 2012; Booth-Kewley, Edwards, & Rosenfeld, 1992; Lautenschlager & Flaherty, 1990). Future research may choose to provide confidentiality rather than anonymity which may improve accuracy of reporting and allow re-test validity to be conducted.

The recommendations regarding the minimum sample size necessary to obtain an adequately stable factor solution are typically stated in terms of minimum sample size or the minimum ratio of *N* to the number of items being analysed. Guidelines regarding absolute sample size vary significantly from at least 100 (Gorsuch, 1983), 200 (Guilford, 1954) and upward of 250 (Cattell, 1978). Comrey and Lee (1992) offered a rough rating scale for adequate sample sizes in factor analysis urging 500 or more observations whenever possible in factor analytic studies (100 = *poor*, 200 = *fair*, 300 = *good*, 500 = *very good,* 1,000+ = *excellent*). Ratio recommendations also differed significantly, ranging from 1:3 (Cattell, 1978), 1:5 (Gorsuch, 1983) and even a minimum requirement of 1:10 (Everitt, 1975). The wide variety of recommendations makes sample size guidelines somewhat limiting however this study still recognizes the sample size used was quite small and may influence the statistical analyses. Increasing the sample size in future studies would create greater precision and greater certainty in the results.

The non-clinical sample was predominantly recruited from one University while the clinical sample was recruited from a number of different destinations around the world. While student populations are becoming more diverse, questions may still be raised about the representativeness of the student sample for the general population. Future research may consider demographic matching and extending recruitment efforts to community groups to improve the quality and comparability of the samples. This study also predominately consisted of female participants and while statistically no gender differences were found, prior research concludes females are more likely to respond in a socially desirable manner than males (Bernardi & Guptill, 2008; Chung & Monroe, 2003). There is also growing evidence that the number of males with dissociative difficulties is growing and in some populations may even surpass females such as children and adolescents and criminal offenders (Kluft, 1996; Ellason & Ross, 1999). Future research should aim for more balance in the gender ratio to improve the generalisability of results. Furthermore, this study did not carry out psychiatric elevations to confirm the diagnostic groupings. Future research may consider conducting independent clinical interview and assessments to confirm diagnostic groups.

The construction of the DaCI is clouded by the ongoing debates in the literature regarding phenomenon and symptom classification. For example while some authors agree depersonalisation is a detachment phenomena (Holmes et al., 2005, Allen, 2001), others have argue that not all aspects of depersonalisation are detachment (Brown et al., 2005; Steel et al., 2009). Steel and colleagues (2009) states observing part of the personality, out of body experiences and the presence of observing ego are compartmentalisation phenomena that have previous been grouped as detachment. Brown and colleagues (2005) suggests made actions should also be

classified as compartmentalisation. Disagreement continues with some authors proposing dissociation is a multidimensional concepts that involves diverse experiences such as absorption (Bernstein & Putnam, 1986; Bruere, 2002) while other argue absorption and other alterations in the field of consciousness are not dissociative symptoms and added to the dissociation concept being to vague (Steele et al., 2009). Further debate stems regarding encoding (Allen et al., 1999) vs. retrieval deficits in memory (Steele et al., 2009). The discrepancies in the literature limits the impact the DaCI could have clinically on the field and its potential use.

The DaCI did not use any formal rating scale to collect expert opinions. Future research may consider the expert judgment method (Ballay, 1997) for gathering the opinions of a group of experts. It is a structured technique involving a multistep procedure: 1) provide a written definition of compartmentalisation and detachment, 2) assessment by experts who individually categorization each item as "C" for compartmentalisation, "D" for detachment, and "NC" for non-congruence with either C or D; and 3) analyses of the expert's personal estimate (Mazzotti et al., 2016). This method may help to reduce uncertainty and provide more consensus on categorization of symptoms.

This study also has a number of strengths including being the first known study to create an assessment tool that is theoretically informed and is able to differentiate two proposed types of dissociation: compartmentalisation and detachment. This study utilized both clinical and non-clinical samples to develop and analyse the psychometric properties of the DaCI. In addition, the DaCI is considered a short assessment measure with only 22 items compared to current dissociative scales (e.g., DES 28 items or the MID 168 items). It also included a validity scale, unlikely most short measures of dissociation.

4.4. Conclusion

In summary, this study developed and revealed excellent psychometric properties and a clear 2-factor solution for a 22-item dissociation scale (i.e., the DaCI). This study found the scale had solid psychometric properties and could differentiate compartmentalisation and detachment. Future work will further examine the utility of the DaCI in clinical and research settings.

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APPENDIX A

Public Notice

PARTICIPANTS WANTED!!!

UNIVERSITY OF CANTERBURY

Do you want to be in a Psychology study looking at dissociation?

Chance to win $50 voucher. 16 up for grabs!!!

We are interested in constructing a new assessment measure to differentiate two types of dissociation

Participants would be required to take part in an online survey (Approx. 25mins)

Are you:

- 18 years+
- Fluent in English

We are looking for YOU!!!

Take part? Go to the link below:
http://canterbury.qualtrics.com/SE/?SID=SV_bvaGqarMiJcczY1

If you have any questions contact:
Chandele Butler: chandele.butler@pg.canterbury.ac.nz for details (Masters student)

Martin Dorahy: martin.dorahy@canterbury.ac.nz (Supervisor)

This project has been reviewed and approved by the University of Canterbury Human Ethics Committee.

Dissociation Study Participation http://canterbury.qualtrics.com/SE/?SID=SV_bvaGqarMiJcczY1

Dissociation Study Participation http://canterbury.qualtrics.com/SE/?SID=SV_bvaGqarMiJcczY1
Dissociation Study Participation http://canterbury.qualtrics.com/SE/?SID=SV_bvaGqarMiJcczY1
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APPENDIX B

Participant Information Sheet

"Dissociative experiences: The development of an assessment tool."

You are warmly invited to take part in a research project that is trying to develop a new scale to assess dissociation experiences. Such experiences include things like losing track of time and feeling disconnected from oneself. We are aiming to further understand these complex experiences and as such are seeking participants who are willing to complete our newly constructed questionnaire and three other short questionnaires, which will take approximately 25 minutes. Below is a summary of the research.

Aim of the Study

The study of dissociation is generating increased interest in the psychological and medical literatures. The term dissociation encompasses a wide variety of psychological processes and phenomena. Currently, substantial evidence identifies different kinds of dissociative experiences. The clear measurement of these could have significant theoretical, empirical and therapeutic implications. This research aims to develop a new assessment measure for the construct of dissociation, which assesses these different forms of dissociation.

Procedure

Before you decide whether to participate in this study, the research process will be explained. This study is an online survey and can be accessed anywhere there is an internet connection, although a quiet space away from distractions is perferred. If you agree to take part in the study you will be asked basic demographics questions (e.g., gender, age, educational background) before beginning the questionnaires. It should take approximately 25 minutes to complete.

Treatment of Data

Participation is voluntary and you have the right to withdraw at any stage without penalty. Your responses will be completely anonymous, so no one will be aware of how you answered the questions.

Participation in this study will have no health risk. This project has been reviewed and approved by the University of Canterbury Human Ethics Committee and is safe for human participation. Participants should address any complaints to: The Chair, Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch or email: human-ethics@canterbury.ac.nz.

Contact Details

You are free to ask any further questions to Chandele Butler (Dept. of Psychology) or Dr. Martin Dorahy (Dept. of Psychology). They will be pleased to discuss any questions or concerns.

Thank you

Chandele Butler, BA	***Martin Dorahy, PhD***	**Warwick Middleton, MD**
Masters Thesis Student	Associated Professor	Professor
University of Canterbury	University of Canterbury	Cannan Institute
Phone: +64 278 122 163	Phone: +64 3364 3416	Belmont Private Hospital
clb104@uclive.ac.nz	martin.dorahy@canterbury.ac.nz	

APPENDIX C

Consent Form

"Detachment and Compartmentalisation: The development of an assessment tool"

I have been given a full explanation of this project and I have had the opportunity to ask questions.

I understand that participation is voluntary and I may withdraw at any time prior to my data being merged with other data.

I understand that any information or opinions I provide will be kept confidential to the researcher and the supervisors and that any published or reported results will not identify me.

I understand that a thesis is a public document and will be available through the UC Library.

I understand that all data collected for the study will be kept in locked secure facilities and password protected electronic form, and will be destroyed after five years.

I understand the risks associated with taking part and how they will be managed.

I understand that I am able to receive a report on the findings of the study by contacting the researcher at the conclusion of the project.

I understand that for further information I can contact the researcher Chandele Butler on phone number: 0278122163 or email: clb104@uclive.ac.nz and supervisor Martin Dorahy via email: martin.dorahy@canterbury.ac.nz or phone: 3643 416.

If I have any complaints, I can contact the Chair of the University of Canterbury Human Ethics Committee, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz).

By clicking below, I understand what is required of me and I agree to participate in this research.

APPENDIX D

Human Ethnics Committee Approval

UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

HUMAN ETHICS COMMITTEE

Secretary, Lynda Griffioen
Email: human-ethics@canterbury.ac.nz

Ref: HEC 2015/82

20 August 2015

Chandele Butler
Department of Psychology
UNIVERSITY OF CANTERBURY

Dear Chandele

The Human Ethics Committee advises that your research proposal "Detatchment and compartmentalisation: the development of an assessment tool" has been considered and approved.

Please note that this approval is subject to the incorporation of the amendments you have provided in your email of 8 August 2015.

Best wishes for your project.

Yours sincerely

Lindsey MacDonald
Chair
University of Canterbury Human Ethics Committee

APPENDIX E

Dissociative Experiences Scale (DES)

These questions describe experiences that you may have in your daily life. Your answer should show how often these experiences happen to you when you ARE NOT under the influence of alcohol or drugs. CIRCLE a number from 0% to 100% to show what percentage of the time this happens to you. If it happens 45% of the time, circle both 40% and 50%.

Date_____ Age_____ Sex: M F

1. Some people have the experience of driving or riding in a car or bus or subway and suddenly realising that they don't remember what has happened during all or part of the trip.
   0% 10 20 30 40 50 60 70 80 90 100
   (NEVER) (ALWAYS)

2. Some people find that sometimes they are listening to someone talk and they suddenly realise that they did not hear part or all of what was said.
   0% 10 20 30 40 50 60 70 80 90 100
   (NEVER) (ALWAYS)

3. Some people have the experience of finding themselves in a place and having no idea how they got there.
   0% 10 20 30 40 50 60 70 80 90 100
   (NEVER) (ALWAYS)

4. Some people have the experience of finding themselves dressed in clothes that they don't remember putting on.
   0% 10 20 30 40 50 60 70 80 90 100
   (NEVER) (ALWAYS)

5. Some people have the experience of finding new things among their belongings that they do not remember buying.
   0% 10 20 30 40 50 60 70 80 90 100
   (NEVER) (ALWAYS)

6. Some people sometimes find that they are approached by people that they do not know who call them by another name or insist that they have met them before.
   0% 10 20 30 40 50 60 70 80 90 100
   (NEVER) (ALWAYS)

7. Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves do something and they actually see themselves as if they were looking at another person.
   0% 10 20 30 40 50 60 70 80 90 100
   (NEVER) (ALWAYS)

8. Some people are told that they sometimes do not recognise friends or family members.
   0% 10 20 30 40 50 60 70 80 90 100
   (NEVER) (ALWAYS)

9. Some people find that they have no memory for some important events in their lives (for example, a wedding or graduation).
   0% 10 20 30 40 50 60 70 80 90 100
   (NEVER) (ALWAYS)

10. Some people have the experience of being accused of lying when they do not think that they have lied.
    0% 10 20 30 40 50 60 70 80 90 100
    (NEVER) (ALWAYS)

11. Some people have the experience of looking in a mirror and not recognising themselves.
    0% 10 20 30 40 50 60 70 80 90 100
    (NEVER) (ALWAYS)

12. Some people have the experience of feeling that other people, objects and the world around them are not real.
    0% 10 20 30 40 50 60 70 80 90 100
    (NEVER) (ALWAYS)

13. Some people have the experience of feeling that their body does not seem to belong to them.
    0% 10 20 30 40 50 60 70 80 90 100
    (NEVER) (ALWAYS)

14. Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving that event.
    0% 10 20 30 40 50 60 70 80 90 100
    (NEVER) (ALWAYS)

15. Some people have the experience of not being sure whether things that they remember happening really did happen or whether they just dreamed them.
    0% 10 20 30 40 50 60 70 80 90 100
    (NEVER) (ALWAYS)

16. Some people have the experience of being in a familiar place but finding it strange and unfamiliar.
    0% 10 20 30 40 50 60 70 80 90 100
    (NEVER) (ALWAYS)

17. Some people find that when they are watching television or a movie they become so absorbed in the story that they are unaware of other events happening around them.

0% 10 20 30 40 50 60 70 80 90 100
(NEVER) (ALWAYS)

18. Some people find that they become so involved in a fantasy or daydream that it feels as though it were really happening to them.
0% 10 20 30 40 50 60 70 80 90 100
(NEVER) (ALWAYS)

19. Some people find that they sometimes are able to ignore pain.
0% 10 20 30 40 50 60 70 80 90 100
(NEVER) (ALWAYS)

20. Some people find that they sometimes sit staring off into space, thinking of nothing, and are not aware of the passage of time.
0% 10 20 30 40 50 60 70 80 90 100
(NEVER) (ALWAYS)

21. Some people sometimes find that when they are alone they talk out loud to themselves.
0% 10 20 30 40 50 60 70 80 90 100
(NEVER) (ALWAYS)

22. Some people find that in one situation they may act so differently compared with another situation that they feel almost as if they were two different people.
0% 10 20 30 40 50 60 70 80 90 100
(NEVER) (ALWAYS)

23. Some people sometimes find that in certain situations they are able to do things with amazing ease and spontaneity that would usually be difficult for them (for example, sports, work, social situations, etc.).
0% 10 20 30 40 50 60 70 80 90 100
(NEVER) (ALWAYS)

24. Some people sometimes find that they cannot remember whether they have done something or have just thought about doing this (for example, not knowing whether they have just mailed a letter or have just thought about mailing it).
0% 10 20 30 40 50 60 70 80 90 100
(NEVER) (ALWAYS)

25. Some people find evidence that they have done things that they do not remember doing.
0% 10 20 30 40 50 60 70 80 90 100
(NEVER) (ALWAYS)

26. Some people sometimes find writings, drawings, or notes among their belongings that they must have done but cannot remember doing.
0% 10 20 30 40 50 60 70 80 90 100
(NEVER) (ALWAYS)

27. Some people sometimes find that they hear voices inside their head that tell them to do things or comment on things that they are doing.

    0% 10 20 30 40 50 60 70 80 90 100

    (NEVER) (ALWAYS)

28. Some people sometimes feel as if they are looking at the world through a fog so that people and objects appear far away or unclear.

    0% 10 20 30 40 50 60 70 80 90 100

    (NEVER) (ALWAYS)

APPENDIX F

Somatoform Dissociation Questionnaire (SDQ-5)

This questionnaire asks about different physical symptoms or body experiences, which you may have had either briefly or for a longer time. Please indicate to what extent these experiences apply to you in the past year without medical explanations. For each statement, please circle the number in the first column that best applies to YOU.

The possibilities are:
1 = this applies to me NOT AT ALL
2 = this applies to me A LITTLE
3 = this applies to me MODERATELY
4 = this applies to me QUITE A BIT
5 = this applies to me EXTREMELY

	Not at all	**A little**	**Moderately**	**Quite a bit**	**Extremely**
1. I have pain while urinating	1	2	3	4	5
2. My body, or a part of it, is insensitive to pain	1	2	3	4	5
3. I see things around me differently than usual (for example as if looking through a tunnel, or seeing merely a part of an object)	1	2	3	4	5
4. It is as if my body, or a part of it, has disappeared	1	2	3	4	5
5. I cannot speak (or only with great effort) or I can only whisper	1	2	3	4	5

APPENDIX G

DaCI 55-Item Version Administered to the Pilot Study

1. When listening to someone talk, I suddenly realize I do not hear part or all of what was said.

2. I feel uncertain about whether something actually happened, or whether I only dreamed or imagined it.

3. I discover an injury (e.g., cut, burn, large bruise), and have no memory of how it happened.

4. I hear voices in my head that I do not recognize as my own

5. My body feels as if it does not belong to me.

6. Unwanted memories from my past intrude into my daily life.

7. What I see looks 'flat' or 'lifeless', as if I am looking at a picture.

8. I focus on something going on in my mind and more or less lose track of what is happening around me.

9. I feel like I am watching a situation as an observer or spectator.

10. Close friends, relatives, or things familiar to me seem strange or foreign.

11. I cross the street where there is no pedestrian crossing or crosswalk (i.e., jaywalk)

12. I feel divided, as if I have several parts or forces that have feelings, ideas, memories and behaviours that I do not regard as my own.

13. I feel paralysed or unable to move for a period of time.

14. I look in a mirror and do not recognizing myself.

15. I feel as if something or someone has possessed me.

16. I feel like a stranger to myself.

17. I have great difficulty feeling emotions, as though I am dead or numb inside.

18. At times I go into a trance-like state in which I am barely aware, or unaware, of what is happening around me.

19. I notice gaps in my memory for things I know happened to me but I'm unable to remember.

20. I have strong feelings that do not seem to belong to me.

21. I talk to myself when I am alone

22. For no medical or physical reason I cannot feel all or parts of my body.

23. I saw something that I know was not actually there, but experienced it as if it was actually present.

24. I feel detached from memories of things that have happened to me, as if I had not been involved in them.

25. I "blank out" or "space out" or my mind goes totally empty.

26. I feel outside of myself, watching myself do things.

27. People tell me that my behaviour changes drastically, or that I seem like a different person.

28. I feel unable to hear and/or see as if I am deaf and/or blind for a period of time.

29. I find myself in a place and have no idea how I got there or why I am there.

30. At times I feel disconnected from a body that does not seem like mine.

31. Parts of my body seem distorted - like they are bigger or smaller than usual.

32. Something inside of me seems to make me do things that I do not want to do.

33. I eat something from a supermarket before I have paid for it

34. I feel mechanical, like a robot or like I'm not really human.

35. I look at the clock and realize that time has gone by and I cannot remember what has happened.

36. My sense of vision changes where it narrows as if I were in a tunnel, or it broadens as if looking through a wide-angle photographic lens.

37. I feel that there is another part, entity or force inside me that tries to stop me from doing or saying things.

38. I feel as if all or part of my body has disappeared.

39. I remember a distressing past event so vividly it feels as if I was reliving it.

40. I hear voices in my head that tell me what to do or commenting on what I am doing.

41. I smelled something that I know was not there, but it seemed as if it was really there.

42. I do not feel in control of what my body does as if there is someone or something inside me directing my actions.

43. I blame others for my mistakes

44. There are moments when I feel uncertain about where I am or what time it is, like I am disoriented.

45. For no medical or physical reason all or part of my body is insensitive to pain.

46. I notice my handwriting changes drastically to the point I see things I must have written but in handwriting different from my own.

47. I feel as if my body or certain parts of it are not real.

48. I experience the world in a distorted way where other people or things appear to be unclear (e.g., in a fog), far away or really close.

49. I feel frozen, like a statue, while being aware of what is going on around me.

50. I tell a small lie to stop someone being disappointed or cross with me

51. I hear voices in my head that argue or converse with one another.

52. I have seizures or seizure-like episodes for which my doctor can find no medical reason.

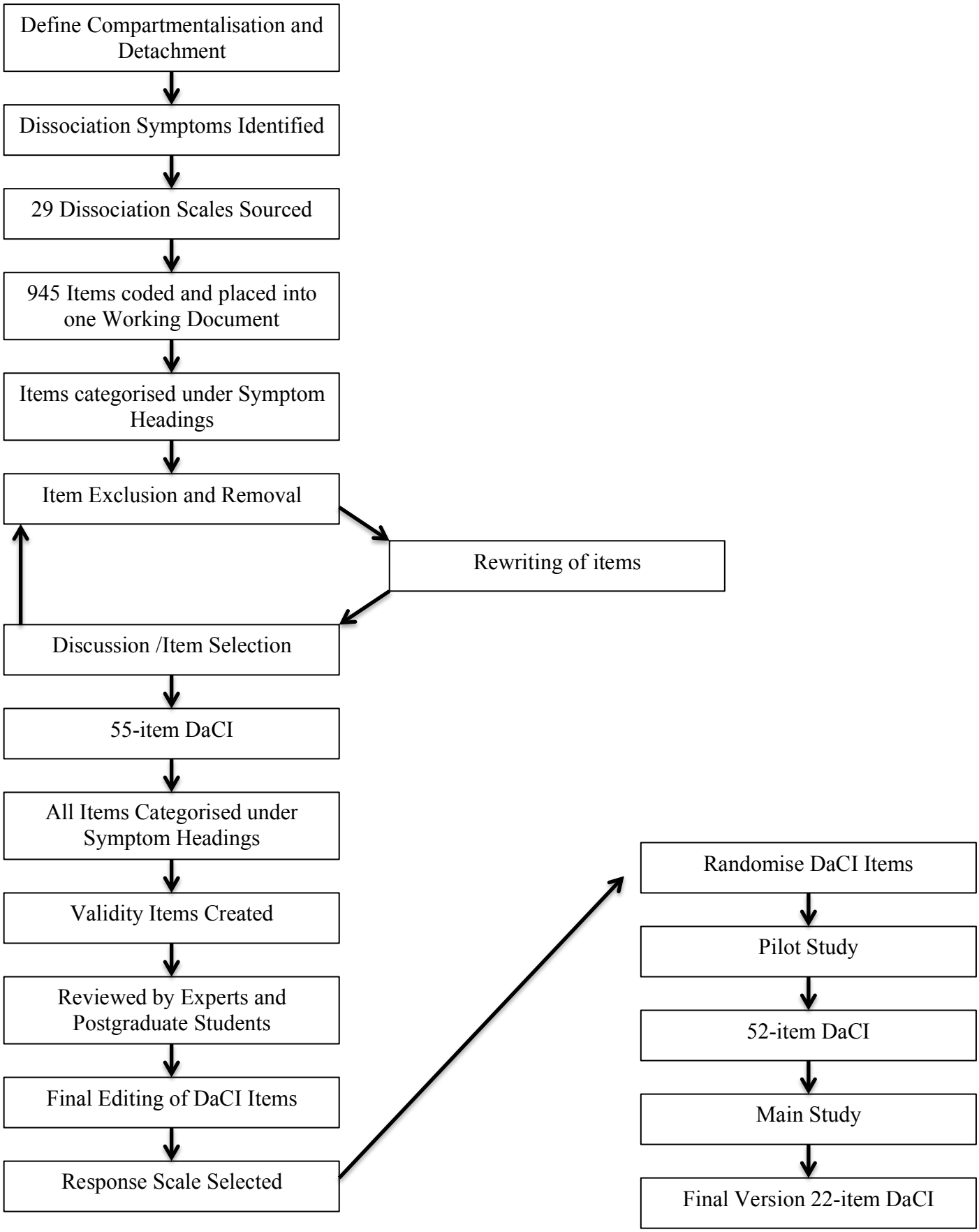
53. I switch back and forth between feelings that seem to belong to me, and feeling that I do not experience as my own.

54. I feel my sense of time changes and things seem to happen in slow motion or in double time.

55. I find evidence that I have done things that I do not remember doing.

APPENDIX H

Development Flow Chart



APPENDIX I

Symptom Classification

Compartmentalisation	Detachment
Identity Alterations • Identity Awareness • Identity Manifestations Dissociative Amnesia Dissociative Fugue Intrusions • Thoughts & Memories • Voices Depersonalisation • Lack of Body Ownership • Made Actions • Possession • Flashbacks Conversion Paralysis Hallucinations Pseudo Seizures Somatoform • Sensory • Pain • Motor	Absorption & Reduced awareness Derealisation • Experiencing Events o E.g., Events feel as though they are not truly happening (dream vs. reality) • Self-Perception o E.g., you feel spaced out, disconnected, unreal, foggy, or fuzzy • Environment Perception o E.g., the world around you feels lifeless, two dimensional, flat, strange or unfamiliar Depersonalisation • Mind Emptiness • Disembodied Feelings • Heighten Self-Observation • Loss of Agency • Time Alteration • Retraction of the Field of Consciousness Emotional Numbing Trace State/Unresponsive Disorientation

APPENDIX J

DaCI Scale Symptom and Construct Reference List

DaCI-55	DaCI-52	DaCI-22	Symptom	Construct
1	1	1	Absorption & reduced awareness	Detachment
2	2		Experiencing events (derealisation)	Detachment
3	3		Dissociative amnesia	Compartmentalisation
4	4		Intrusion (voices)	Compartmentalisation
5	5		Lack of body ownership (depersonalisation)	Compartmentalisation
6	6		Intrusion (memories and thoughts)	Compartmentalisation
7	7	2	Environment perception (derealisation)	Detachment
8	8	3	Absorption & reduced awareness	Detachment
9	9	4	Heighten self-observation (depersonalisation)	Detachment
10	10		Environment perception (derealisation)	Detachment
11	11	5	Validity	Validity
12	12	6	Other identities (awareness)	Compartmentalisation
13	13		Conversion paralysis	Compartmentalisation
14	14		Lack of body ownership (depersonalisation)	Compartmentalisation
15	15	7	Possession (depersonalisation)	Compartmentalisation
16	16		Self-perception (derealisation)	Detachment
17	17		Emotional numbing	Detachment
18	18	8	Trance state (unresponsive)	Detachment
19	19		Dissociative amnesia	Compartmentalisation
20	20	9	Other identities (awareness)	Compartmentalisation
21	21		Validity	Validity
22	22	10	Somatoform (sensory)	Compartmentalisation
23	23		Hallucinations	Compartmentalisation
24	24	11	Experiencing events (derealisation)	Detachment
25	25	12	Mind emptiness (depersonalisation)	Detachment
26	26		Disembodiment feelings (depersonalisation)	Detachment
27	27	13	Identity alterations (manifestations)	Compartmentalisation
28	28		Sensory loss	Compartmentalisation
29	29	14	Dissociative fugue	Compartmentalisation
30	30	15	Lack of body ownership (depersonalisation)	Compartmentalisation
31	31		Self perception	Detachment
32	32	16	Made action (depersonalisation)	Compartmentalisation
33			Validity	Validity
34	33	17	Loss of agency (depersonalisation)	Detachment
35	34	18	Time alteration (depersonalisation)	Detachment
36	35		Retraction of the field of consciousness	Detachment
37			Other identities (awareness)	Compartmentalisation
38			Somatoform disorder (sensory)	Compartmentalisation
39	36		Flashbacks (depersonalisation)	Compartmentalisation
40	37		Intrusion voices	Compartmentalisation
41	38		Hallucinations	Compartmentalisation
42	39	19	Made action (depersonalisation)	Compartmentalisation
43	40		Validity	Validity

44	41		Disorientated	Detachment
45	42		Somatoform (pain)	Compartmentalisation
46	43		Identity alterations (manifestations)	Compartmentalisation
47	44		Self perception (derealisation)	Detachment
48	45		Environment perception (derealisation)	Detachment
49	46		Somatoform (motor)	Compartmentalisation
50	47	20	Validity	Validity
51	48		Intrusion (voices)	Compartmentalisation
52	49		Pseudo seizures	Compartmentalisation
53	50	21	Identity alterations (manifestations)	Compartmentalisation
54	51	22	Time alteration (depersonalisation)	Detachment
55	52		Dissociative Amnesia	Compartmentalisation

APPENDIX K

DaCI 52-item Version Administered to Main Study

1. When listening to someone talk, I suddenly realize I do not hear part or all of what was said.

2. I feel uncertain about whether something actually happened, or whether I only dreamed or imagined it.

3. I discover an injury (e.g., cut, burn, large bruise), and have no memory of how it happened.

4. I hear voices in my head that I do not recognize as my own

5. My body feels as if it does not belong to me.

6. Unwanted memories from my past intrude into my daily life.

7. What I see looks 'flat' or 'lifeless', as if I am looking at a picture.

8. I focus on something going on in my mind and more or less lose track of what is happening around me.

9. I feel like I am watching a situation as an observer or spectator.

10. Close friends, relatives, or things familiar to me seem strange or foreign.

11. I cross the street where there is no pedestrian crossing or crosswalk (i.e., jaywalk)

12. I feel divided, as if I have several parts or forces that have feelings, ideas, memories and behaviours that I do not regard as my own.

13. I feel paralysed or unable to move for a period of time.

14. I look in a mirror and do not recognizing myself.

15. I feel as if something or someone has possessed me.

16. I feel like a stranger to myself.

17. I have great difficulty feeling emotions, as though I am dead or numb inside.

18. At times I go into a trance-like state in which I am barely aware, or unaware, of what is happening around me.
19. I notice gaps in my memory for things I know happened to me but I'm unable to remember.

20. I have strong feelings that do not seem to belong to me.

21. I talk to myself when I am alone

22. For no medical or physical reason I cannot feel all or parts of my body.

23. I saw something that I know was not actually there, but experienced it as if it was actually present.

24. I feel detached from memories of things that have happened to me, as if I had not been involved in them.

25. I "blank out" or "space out" or my mind goes totally empty.

26. I feel outside of myself, watching myself do things.

27. People tell me that my behaviour changes drastically, or that I seem like a different person.

28. I feel unable to hear and/or see as if I am deaf and/or blind for a period of time.

29. I find myself in a place and have no idea how I got there or why I am there.

30. At times I feel disconnected from a body that does not seem like mine.

31. Parts of my body seem distorted - like they are bigger or smaller than usual.

32. Something inside of me seems to make me do things that I do not want to do.

33. I feel mechanical, like a robot or like I'm not really human.

34. I look at the clock and realize that time has gone by and I cannot remember what has happened.

35. My sense of vision changes where it narrows as if I were in a tunnel, or it broadens as if looking through a wide-angle photographic lens.

36. I remember a distressing past event so vividly it feels as if I was reliving it.

37. I hear voices in my head that tell me what to do or commenting on what I am doing.

38. I smelled something that I know was not there, but it seemed as if it was really there.

39. I do not feel in control of what my body does as if there is someone or something inside me directing my actions.

40. I blame others for my mistakes

41. There are moments when I feel uncertain about where I am or what time it is, like I am disoriented.

42. For no medical or physical reason all or part of my body is insensitive to pain.

43. I notice my handwriting changes drastically to the point I see things I must have written but in handwriting different from my own.

44. I feel as if my body or certain parts of it are not real.

45. I experience the world in a distorted way where other people or things appear to be unclear (e.g., in a fog), far away or really close.

46. I feel frozen, like a statue, while being aware of what is going on around me.

47. I tell a small lie to stop someone being disappointed or cross with me

48. I hear voices in my head that argue or converse with one another.

49. I have seizures or seizure-like episodes for which my doctor can find no medical reason.

50. I switch back and forth between feelings that seem to belong to me, and feeling that I do not experience as my own.

51. I feel my sense of time changes and things seem to happen in slow motion or in double time.

52. I find evidence that I have done things that I do not remember doing.

APPENDIX L

Mindful Attention Awareness Scale (MAAS)

Instructions: Using the 0-6 scale shown, please indicate to what degree were you having each experience described below when you were paged. Please answer according to what really reflected your experience rather than what you think your experience should have been.

	Not at all			**Some what**			**Very much**
1. I was finding it difficult to stay focused on what was happening.	0	1	2	3	4	5	6
2. I was doing something without paying attention.	0	1	2	3	4	5	6
3. I was preoccupied with the future or the past.	0	1	2	3	4	5	6
4. I was doing something automatically, without being aware of what I was doing.	0	1	2	3	4	5	6
5. I was rushing through something without being really attentive to it.	0	1	2	3	4	5	6

APPENDIX M

DaCI 22-item Final Version

DIRECTIONS
This questionnaire assesses experiences you may have had. For each item, circle the number that best describes how often that experience happens to you when you HAVE NOT been under the influence of alcohol or drugs. Circle "0" if it has never happened to you, circle "7" if it happens daily to you. If it occurs sometimes but not daily, circle the number between 1 and 6 that is the best fit for you.

1. When listening to someone talk, I suddenly realize I do not hear part or all of what was said.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

2. What I see looks 'flat' or 'lifeless', as if I am looking at a picture.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

3. I focus on something going on in my mind and more or less lose track of what is happening around me.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

4. I feel like I am watching a situation as an observer or spectator.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

5. I feel divided, as if I have several parts or forces that have feelings, ideas, memories and behaviours that I do not regard as my own.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

6. I feel as if something or someone has possessed me.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

7. At times I go into a trance-like state in which I am barely aware, or unaware, of what is happening around me.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

8. I cross the street where there is no pedestrian crossing or crosswalk (i.e., jaywalk)

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

9. I have strong feelings that do not seem to belong to me.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

10. For no medical or physical reason I cannot feel all or parts of my body.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

11. I feel detached from memories of things that have happened to me, as if I had not been involved in them.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

12. I "blank out" or "space out" or my mind goes totally empty.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

13. People tell me that my behaviour changes drastically, or that I seem like a different person.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

14. I find myself in a place and have no idea how I got there or why I am there.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

15. I tell a small lie to stop someone being disappointed or cross with me

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

16. At times I feel disconnected from a body that does not seem like mine.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

17. Something inside of me seems to make me do things that I do not want to do.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

18. I feel mechanical, like a robot or like I'm not really human.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

19. I look at the clock and realize that time has gone by and I cannot remember what has happened.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

20. I do not feel in control of what my body does as if there is someone or something inside me directing my actions.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

21. I switch back and forth between feelings that seem to belong to me, and feeling that I do not experience as my own.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily

22. I feel my sense of time changes and things seem to happen in slow motion or in double time.

0	1	2	3	4	5	6	7
Never	Once or twice in my life	No more than once a year	Once every few months	At least once a month	At least once a week	Multiple times a week	Daily